

REMARKS

The Office Action mailed on August 17, 2004, and the references cited therein, have been carefully studied and, in view of the following remarks, reconsideration and allowance of this application are most respectfully requested. Claims 1-17 are currently pending. The Examiner has rejected claims 1-5. Claim 6-17 are allowed. Applicants respectfully submit that all of the pending claims are in condition for allowance.

The Examiner has rejected claims 1-5 under 35 U.S.C. § 102(e) as being anticipated by Lazarev et al. (U.S. Application No. 2004/0067324). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons.

According to the Examiner, Lazarev et al. disclose an organic photodetector comprising one or more subcells in series, "wherein the thicknesses of the organic electron donor layer and the organic electron acceptor layer are low enough to allow tunneling, since the electron hole recombination region (23) is about 5 Å." However, Applicants respectfully submit that Lazarev et al. do not teach or suggest an organic photodetector comprising one or more subcells in series, wherein the thicknesses of the *organic electron donor layer* and the *organic electron acceptor layer* are low enough to allow tunneling.

According to Lazarev et al., electron-hole recombination region 23 is an "additional metal interlayer" formed between subcells to prevent the formation of heterojunctions between the electron donating layer 11 of one subcell and electron accepting layer 12 of the adjacent subcell (paragraph [0114]). There is no teaching or suggestion that the thickness of this additional interlayer is related to the thickness of the electron donating layers or to the electron accepting layers within the subcells. Rather, the electron-hole recombination region is a layer that is separate from the electron donating layers and the electron accepting layers, and the thickness of the electron-hole recombination region is not related to the thickness of the electron donating layers and the electron accepting layers. Thus, applicants respectfully submit that Lazarev et al. does not teach each element of the present claims and does not anticipate the presently claimed invention.

In an attempt to reconstruct present claim 2, the Examiner reasons that, "the scale of Lazarev et al. Figure 13 indicates that since the electron hole recombination region (23) is about 5 Å in thickness (paragraph [0118]), the electron donor (11) and electron acceptor layers (12) are within the scope of about 30 Å." Applicants respectfully submit that a person of ordinary skill in the art would recognize that figure 13 is not drawn to scale, and so does not teach or suggest an organic photodetector wherein the electron donor layers and the organic electron acceptor layers each have a thickness of less than about 30 Å.

When, as in the present case, a cited reference does not disclose that the drawings are to scale, arguments based on the measurement of the drawing features are of little value. MPEP 2125. "[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular size if the specification is silent on the issue." *Hocherson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3rd 951, 956; 55 USPQ2d 1487, 1491 (Fed. Cir. 2000).

By the Examiner's reasoning (which assumes that Figure 13 is drawn to scale), the scale of Lazarev et al. Figure 13 would also indicate that, "since" the electrodes (3) and (20) are at least 100 Å in thickness (paragraph [0092]), the electron donor (11) and electron acceptor layers (12), (which appear to be about the same thickness as the electrodes 3 and 20) must also be at least 100 Å thick and are therefore not within the scope of about 30 Å or less. Additionally, if Figure 13 were drawn to scale and electron hole recombination region 23 represented a layer 5 Å thick, the anode and the cathode (3, 20) would need to be depicted as at least twenty times thicker than electron hole recombination region 23. (The smallest electrode thickness disclosed by Lazarev et al. is 100 Å, or 10 nm, as taught at paragraph [0092]). As one skilled in the art would understand, neither anode 3 nor cathode 20 is shown twenty times thicker than electron-hole recombination region (23) in Figure 13, because Figure 13 is not drawn to scale. With respect to claim 2, the Examiner has failed to meet the initial burden of coming forward with evidence to reasonably support the belief that electron donating layer 11 and electron accepting layer 12 necessarily have thicknesses less than about 30 Å.

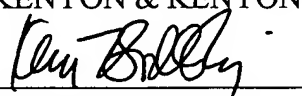
In view of the foregoing, the rejections to dependent claims 3-5 are moot.

Conclusion

In order to be anticipatory, a reference must describe "each and every element" with the condition that, "[t]he identical invention must be shown *in as complete detail* as is contained in the claim." (MPEP 2131). The cited reference clearly fails to meet the conditions of an anticipatory reference. Nowhere does Lazarev teach a device having organic electron donor and acceptor layers, wherein the thicknesses of the organic electron donor layer and the organic electron acceptor layer are necessarily low enough to allow tunneling. Reconsideration and withdrawal of the rejection of Claims 1-5 under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent Application 2004/0067324 is respectfully requested.

In view of the foregoing, it is respectfully submitted that the objections have been obviated and the pending claims are in condition for allowance. If there are any questions relating to the instant application, the Examiner is respectfully requested to telephone the undersigned attorney.

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